CLAIMS

1. A conditional order transaction network that matches or compares buy and sell orders for a plurality of security instruments based upon conditions set forth within the order, including the price represented as an algorithm with constraints thereon, the transaction network comprising:

a variable number of trader terminals for entering an order for a security instrument in the form of an algorithm with constraints thereon that represent a willingness to transact, where the price is the dependent variable of the algorithm within the constraints and the price of another security as an independent variable, the algorithm representing a buy or sell order; and

at least one controller computer coupled to each of the trader terminals over a communications network and receiving as inputs,

a) each algorithm with its corresponding constraints and

b) at least one external price feeds depicting prices of various securities and contracts from external multiple exchanges which may be used as an independent variable of the algorithm or an input to a constraint variable, the controller computer comprising,

means for matching, in accordance with the constraints and conditions, algorithmic buy orders with algorithmic sell orders, and

means for matching or comparing, in accordance with the constraints and conditions, algorithmic buy/sell orders with non-algorithmic sell/buy orders through the use of the external multiple data sources.

2. The conditional order transaction network of claim 1 wherein the order price, as represented by an algorithm, includes an order quantity subject to another algorithm.

1   3. The conditional order transaction network of claim 1 wherein the
2 controller computer matches/compares orders in real-time as each order is
3 received at the controller computer and as each new price of each other
4 conditional security is received at the controller computer.

1   4. The conditional order transaction network of claim 1 further
2 comprising means for maintaining the identity of the terminal on which the
3 order was entered.

1   5. The conditional order transaction network of claim 1 wherein the
2 order algorithm can be represented as a line in two dimensional space with
3 constraints having the price of one security as one axis and the price of
4 another security as its other axis.

1   6. The conditional order transaction network of claim 1 wherein the
2 instrument includes bonds.

1   7. The conditional order transaction network of claim 1 wherein the
2 instrument includes warrants.

1   8. The conditional order transaction network of claim 1 wherein the
2 independent variable may include multiple independent variables.

1   9. The conditional order transaction network of claim 1 wherein the
2 sell order includes a sell short order.

1   10. The conditional order transaction network of claim 1 wherein the
2 instrument includes convertible securities.

1   11. The conditional order transaction network of claim 1 wherein the
2 instrument includes stocks.

1   15 12. The conditional order transaction network of claim 1 wherein the
2   instrument includes options.

1   16 13. The conditional order transaction network of claim 1 wherein the
2   instrument includes futures.

1   17 14. The conditional order transaction network of claim 1 wherein the
2   instrument includes forward contracts.

1   18 15. The conditional order transaction network of claim 1 wherein the
2   instrument includes swap contracts.

1   3 16. The conditional order transaction network of claim 2 wherein the
2   price may be a yield.

1   4 17. The conditional order transaction network of claim 2 wherein the
2   price may be a volatility.

1   5 18. The conditional order transaction network of claim 2 wherein the
2   price may be a yield spread.

1   19. The conditional order transaction network of claim 1 wherein one
2   of the conditions is the requirement that another security is traded
3   contemporaneously.

1   19 20. The conditional order transaction network of claim 1 wherein one
2   of the conditions is that no transaction can occur when the independent
3   variable price is above or below set limits.

1   20 21. The conditional order transaction network of claim 1 wherein one
2   of the conditions is that the price is not to exceed a specified level regardless
3   of the results produced by the algorithm.

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1   21. 22. The conditional order transaction network of claim 1 wherein one of the
2   conditions is that the price is not to be less than a specified level regardless of the
3   results produced by the algorithm.

1   22. 23. The conditional order transaction network of claim 1 wherein one of the
2   conditions is the requirement that the orders be matched/compared without use of
3   prices fed from said external multiple exchanges.

1   24.   A trader workstation for trading and negotiating prospective trades for
2   instruments referenced in buy and sell orders, based upon conditions set forth in
3   the orders including the price represented by an algorithm with constraints
4   thereon, comprising;
5   a display device for displaying the selected parameters of buy
6   and sell orders in a prioritized sequence in a descending order of
7   favorability across a display field, with the most favorable order at one
8   distal end and the least favorable at the other distal end;
9   an input device for entering outgoing orders to be traded or
10 negotiated into the trader workstation; and
11   a computer for receiving the outgoing orders and incoming
12 order information from traders' terminals, and for controlling the
13 display device, said computer including,
14   a comparator for comparing all incoming orders relative to
15 outgoing orders, and
16   a sorter that resequences the orders in real-time in the display
17 field as each order is received to reflect changes in the relative
18 favorability of the orders.

1   25.   The workstation of claim 21 wherein the order price, as
2   represented by an algorithm, includes an order quantity subject to another
3   algorithm.

1   26.   The workstation of claim 21 wherein the computer
2   matches/compares orders in real-time as each order is received at the

3 computer and as each new price of each other conditional security is
4 received at the computer.

1   27. The workstation of claim 21 further comprising means for
2 maintaining the identity of the trader's terminal on which the order was
3 entered.

1   28. The workstation of claim 21 wherein the order algorithm can be
2 represented as a line in two dimensional space with constraints having the
3 price of one security as one axis and the price of another security as its
4 other axis.

1   29. The workstation of claim 21 wherein the sell order includes a sell
2 short order.

1   30. The workstation of claim 21 wherein the instrument includes
2 convertible securities.

1   31. The workstation of claim 21 wherein the instrument includes
2 stocks.

1   32. The workstation of claim 21 wherein the instrument includes
2 options.

1   33. The workstation of claim 21 wherein the instrument includes
2 futures.

1   34. The workstation of claim 21 wherein the instrument includes
2 forward contracts.

1   35. The workstation of claim 21 wherein the instrument includes
2 swap contracts.

36. The workstation of claim 22 wherein the price may be a yield.

37. The workstation of claim 22 wherein the price may be a volatility.

38. The workstation of claim 22 wherein the price may be a yield spread.

39. The workstation of claim 21 wherein the relative favorability is determined by the current value of the underlying security.

40. The workstation of claim 21 wherein said display device further includes a ticker field, for displaying changing security values from external markets, an order entry field, for displaying current order information of the algorithms to be negotiated/traded, and a wild card field, for displaying research data related to the algorithms.

41. A conditional order transaction network that matches or compares buy and sell orders for a plurality of items based upon conditions set forth within the order, including the price represented as an algorithm with constraints thereon, the conditional order transaction network comprising:

a variable number of trader terminals for entering an order for an item in the form of an algorithm with constraints thereon that represent a willingness to transact, where the price is the dependent variable of the algorithm within the constraints and the price of another item as an independent variable, the algorithm representing a buy or sell order; and

controller computer means coupled to each of the trader terminals over a communications network and receiving as inputs, each algorithm with its corresponding constraints;

means for matching, in accordance with the constraints and conditions, algorithmic buy orders with algorithmic sell orders; and

17   means for matching or comparing, in accordance with the

18   constraints and conditions, algorithmic buy/sell orders with non-

19   algorithmic sell/buy orders.